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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,629	09/30/2003	Avinash Dalmia	03141-P0449A	4650
24126	7590	10/10/2006	EXAMINER	
ST. ONGE STEWARD JOHNSTON & REENS, LLC			MOSS, KERI A	
986 BEDFORD STREET			ART UNIT	
STAMFORD, CT 06905-5619			PAPER NUMBER	

1743

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,629

Applicant(s)

DALMIA ET AL.

Examiner

Keri A. Moss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6, 11-16, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 11-16 and 18-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

1. Amendment filed July 10, 2006 is hereby acknowledged. Claims 1-3, 6, 11-16 and 18-19 are pending.

Response to Amendment

2. Claims 1-2 and 11-15 have been rejoined in light of applicant's amendments.

The affidavit filed on July 10, 2006 under 37 CFR 1.130 is sufficient to overcome the Prohaska (USP 7,013,707) reference. Therefore, the rejection under Prohaska has been withdrawn.

The terminal disclaimer has been recorded. The double patenting rejection has been withdrawn.

Rejection of claim 5 as indefinite has been withdrawn in light of applicant's amendments.

Rejection under LaConti (USP 4,820,386) and Rhodes (USP 6,830,730) are upheld in light of applicant's arguments and amendments.

Rejection under Goken (5,637,506) has been withdrawn in light of applicant's

Election/Restrictions

3. Applicant's election of claims 1-2 and 7-15 in the reply filed on July 10, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

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4. This application contains claims 7-10 are drawn to an invention nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims **3 and 16** are rejected under 35 U.S.C. 102(b) as anticipated by LaConti (USP 4,820,386). In Figure 6, LaConti discloses an apparatus and method for determining a total concentration of a desired component in a sample, comprising: a reactor (26) for oxidizing or reducing the sample (Table 1); a filter (36) coupled to said reactor via the substrate for filtering out undesirable components and for permitting the desired component to pass through; and a detector (24) coupled to said filter via the disk 32 for detecting the component. The detector is an electrochemical gas sensor (column 4 lines 7-14). Figure 1 discloses a substrate (parts holding the reservoir 14, diffusion tube 30 and gas flow chamber 40) on which electrodes (22, 24, and 26) are deposited. Figure 6 further discloses an ionomer membrane (20) having a first and second surface; an electrode 22, 24 or 26 in contact with the surface of the substrate; an opening in the form of pores extending from the first surface of the ionomer membrane to the second surface proximate to the electrode for defining a passage in the form of pores (column 3 lines 44-50). A gas is inherently in this porous opening as the LaConti apparatus is not in a vacuum.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims **3, 6 and 16 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhodes (USP 6,830,730) in view of LaConti, supra. Rhodes discloses a system and method for determining a total concentration of a component comprising a thermal oxidizer reactor for oxidizing the sample (column 5 lines 1-5) coupled to a detector (column 5 lines 34-37) or a plurality of detectors (column 6 lines 1-5) coupled to a filter (column 5 line 66) that filters out undesirable components (column 5 lines 36-38). In addition to the filter, the apparatus can include a dryer for separating water from the components (column 5 lines 46-65). Rhodes discloses a plurality of electrochemical gas sensors for detecting multiple components (column 10 line 57; column 14 lines 1-3).

Rhodes does not disclose the specifics of the electrochemical sensor. LaConti, supra, discloses an electrochemical sensor (column 4 lines 7-14) comprising: a substrate (Fig. 1, parts holding the reservoir 14, diffusion tube 30 and gas flow chamber 40) on which electrodes (parts 22, 24, and 26) are deposited; an ionomer membrane (Fig. 6 part 20) having a first and second surface; an electrode (Fig. 6 parts 22, 24 or 26) in contact with the surface of the substrate; an opening in the form of pores extending from the first surface of the ionomer membrane to the second surface proximate to the electrode for defining a passage in the form of pores (column 3 lines

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44-50). A gas is inherently in this porous opening as the LaConti apparatus is not in a vacuum.

LaConti teaches that this electrochemical sensor leads to faster response times and greater immunity to interference from counter electrode reaction products. Therefore, it would have been obvious for one of ordinary skill in the art to combine the apparatus of Rhodes with the electrochemical sensor taught by LaConti in order to gain the advantage of having a faster response time and to gain the additional advantage of a sensor that has a more accurate result.

9. Claims **18-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhodes and LaConti as applied to claims 3,6 and 16 supra and further in view of Baccanti (USP 5,612,225). While Rhodes teaches a separating step, Rhodes and LaConti do not teach including a gas chromatography column in the apparatus. Baccanti teaches an analytical apparatus with a gas chromatography column (Fig. 1 part 5) coupled to a reactor (Fig. 1 part 4) and preceding a filter (Fig. 1 part 7). Baccanti teaches that this apparatus and method separates methane from Nitrogen, leading to more accurate results. Therefore it would have been obvious for one of ordinary skill in the art to modify Rhodes and LaConti with the gas chromatography column taught by Baccanti in order to eliminate undesirable compounds such as methane, providing a more accurate result.

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10. Claims 1-3, 6, 11-14, 15-17, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baccanti (USP 5,612,225) in view of LaConti. Baccanti teaches a method and apparatus for determining total concentration of a component in a sample by reducing the sample in a reactor (Fig. 1 part 4), flowing the gas through a gas chromatograph (Fig. 1 part 5) for separation, filtering out CO₂ in a CO₂ filter (Fig. 1 part 7), then analyzing the combustion gases using a detector (Fig. 1 part 8).

Baccanti does not teach using an electrochemical detector. LaConti, supra, discloses an electrochemical sensor (column 4 lines 7-14) comprising: a substrate (Fig. 1, parts holding the reservoir 14, diffusion tube 30 and gas flow chamber 40) on which electrodes (parts 22, 24, and 26) are deposited; an ionomer membrane (Fig. 6 part 20) having a first and second surface; an electrode (Fig. 6 parts 22, 24 or 26) in contact with the surface of the substrate; an opening in the form of pores extending from the first surface of the ionomer membrane to the second surface proximate to the electrode for defining a passage in the form of pores (column 3 lines 44-50). A gas is inherently in this porous opening as the LaConti apparatus is not in a vacuum. LaConti also teaches using a plurality of detectors for comparison testing (Example 8). Furthermore, LaConti also teaches that many gases may be detected with this electrochemical gas detector (Table 1). Therefore, it would have been obvious for one of ordinary skill in the art to use a plurality of LaConti sensors in order to detect more than one gas at a time.

LaConti teaches that this electrochemical sensor leads to faster response times and greater immunity to interference from counter electrode reaction products.

Therefore, it would have been obvious for one of ordinary skill in the art to combine the

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apparatus of Baccanti with the electrochemical sensor taught by LaConti in order to gain the advantage of having a faster response time and to gain the additional advantage of a detector that has a more accurate result.

Response to Arguments

11. Applicant argues that the reactor taught by LaConti is not Applicant's claimed reactor because LaConti's reactor does not oxidize or reduce the sample nor does it heat the component. First, LaConti's reactor, part 26 oxidizes the sample (Table 1). Second, Examiner notes that Applicant has claimed a "reactor for oxidizing or reducing the sample," but does not claim a reactor that reduces by heating. As demonstrated supra, the reactor in LaConti oxidizes or reduces the sample, therefore it meets Applicant's claims.

12. Applicant also argues that LaConti's filter is not coupled to the reactor. "Coupled" is defined by Webster's dictionary as "joined together" and the filter is joined to the reactor by the substrate, as explained supra. Therefore, the filter is coupled to the reactor.

13. Applicant's arguments regarding Rhodes, which relate to the applicability of Rhodes after the amendment are moot in view of the new grounds of rejection.

Terminal Disclaimer


14. The terminal disclaimer filed on July 10, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 7,013,707 has been reviewed and is accepted.

Conclusion

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15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Jill Warden
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